

The Codification of Dictionary Traditions in Japanese Loanword Epenthetic Vowels

Mark Irwin

(山形大学人文学部人間文化学科)

山形大学紀要（社会科学）第43巻第2号別刷

平成 25 年（2013）2 月

論 説

The Codification of Dictionary Traditions in Japanese Loanword Epenthetic Vowels

Mark Irwin

Faculty of Literature and Social Sciences

Yamagata University

Abstract

Japanese loanword borrowing phases can be broadly divided into three chronological stages: Iberian, Dutch and Western. In the earliest phases, replication of epenthetic vowels occurred with considerable frequency, to the extent that it was the unmarked pattern of adaptation. By the Dutch borrowing phase, only remnants of vowel replication are found and epenthesis of the high vowels u or i had become the norm. By the 21st century, only scattered vestiges of vowel replication are evident and the phenomenon has become highly marked. What is notable, however, is that these vestiges are almost entirely confined to borrowings from German, Dutch and Arabic and occur only after a donor velar or pharyngeal fricative. This paper will argue that vowel replication has been kept alive in such borrowings thanks to dictionary traditions formulated and passed on by Japanese foreign language scholars. These dictionary traditions differ according to donor language. An excellent example of codification, they are the most salient evidence of the primarily distant, and overwhelmingly orthographic, borrowing that has characterised the last four centuries of borrowing into the Japanese language.

要旨

日本語への借用語は、イベリア期・オランダ期・西洋期という三つに分けることができる。イベリア期やオランダ前期では、語中・語尾の母音添加複製は無標になるほど頻繁に見られているが、オランダ末期になると、母音添加複製痕跡しか残らず、/i u/の母音添加が無標になった。21世紀になり、母音添加複製の痕跡さえ希有になり、その現象が極めて有標になってきたが、注目すべきは、その痕跡がドイツ語・オランダ語やアラビア語から借用された外来語以外には殆どないことである。本稿では、ドイツ語・オランダ語やアラビア語の中の母音添加複製は、日本人の外国語学者が編み出して引き継いだ「辞典伝統」(dictionary traditions)に保存されてきたと論じる。その辞典伝統は様々であるが、標準化の適例として、16世紀から続いてきた外来語史の特色である表記に基づいた「遠隔借用」の重要な証拠である。

Keywords: Japanese, sociohistorical linguistics, borrowing, codification, epenthetic vowels

1. Introduction

After briefly introducing in §2 the epenthetic vowels found in modern Japanese loanwords, §3 will examine in more detail the patterns of vowel epenthesis apparent in earlier Japanese loanwords. In §4, these earlier patterns will be shown to be very similar to a rare and highly marked pattern found in modern Japanese. In §5, I will claim the reason for this similarity is due to what I term dictionary traditions, a form of sociolinguistic codification. Some brief conclusions will be offered in §6.

2. Epenthetic Vowels in Japanese Borrowings: An Overview

Viewed synchronically, the epenthetic vowels found in Japanese loanwords¹ are largely uncontroversial. As all syllables in Japanese must be either open, or have a coda in a mora obstruent /Q/ or mora nasal /N/, the closed syllables and consonant clusters frequently found in donor words are adapted to Japanese phonotactics by means of vowel epenthesis. Synchronically, the most commonly found epenthetic vowels are /u/ and, to a lesser extent, /i/, both of which are conspicuous in Japanese for undergoing regular devoicing in certain environments (Maekawa & Kikuchi 2005, Vance 2008: 206-214). The vowel /u/ is also the most subject to weakening and deletion in Japanese in general (Sagisaka & Tohkura 1984). Examples of this /u/-epenthesis are shown in (1). Epenthetic /i/, as illustrated in (2), is largely restricted to the donor affricates [tʃ dʒ],² donor retroflex and palatal consonants, and to donor words containing a [ks] cluster. An epenthetic /o/ is found after donor [t d], as well as [Cwa] clusters borrowed from French. This is illustrated in (3). The value of the epenthetic vowel is determined not by the adapted Japanese consonant but by the donor consonant: i.e. an identical adapted consonant may be followed by two different epenthetic vowels, as illustrated in (4).

¹ Also termed *gairaigo*. I follow Irwin (2011: 10) in defining a Japanese loanword as ‘a foreign word which has undergone adaptation to Japanese phonology, has been borrowed into Japanese after the mid-16th century and whose meaning is, or has been, intelligible to the general speechcommunity.’ Not treated in this paper are *gaikokugo*, ‘foreign word[s] which ha[ve] not undergoneadaptation, or ... whose meaning has always been unintelligible to the general speech community’ (ibid.).

² For reasons which will become clear later, I commit to neither a phonological (e.g. LaCharité & Paradis 2005) nor a phonetic donor input (e.g. Silverman 1992). All donor forms are thus indicated between vertical bars.

(1)		Eng. <i>game</i>	geemu	‘game’
		Eng. <i>screw</i>	sukuryuu	‘screw’
		Ger. <i>Seil</i>	zairu	‘climbing rope’
		Fr. <i>gratin</i>	gurataN	‘gratin’
(2)	ɖ̥	Eng. <i>judge</i>	jaQji	‘judge, score’
	tʃ̥	Eng. <i>catch</i>	kyaQči	‘catch’
	rʲ	Ru. Царь	caari	‘tsar’
	ç̥	Eng. <i>text</i>	tekisuto	‘text’
(3)	t̥	Du. <i>spuit</i>	supoito	‘pipette’
	d̥	Eng. <i>Dracula</i>	dorakyura	‘Dracula’
	kɸwa	Fr. <i>croissant</i>	kurowaQsaN	‘croissant’
(4)	ɖ̥	Eng. <i>page</i>	peeji	‘page’
	ʒ̥	Fr. <i>beige</i>	beeju	‘beige’

3. Vowel Replication in Early Japanese Borrowings

Viewed diachronically, Japanese loanword borrowing can be divided into three broad phases, as illustrated in Fig. 1.

PHASE	DATES	DONOR LANGUAGES	ENGINE
Iberian	mid-16 th → mid-17 th	chiefly Portuguese , some Latin and Spanish	Catholic proselytizing
Dutch	mid-17 th → mid-19 th	overwhelmingly Dutch	European science and technology (<i>rangaku</i>)
Western	mid-19 th → present	German , French , Russian , Italian , but now overwhelmingly English	modernization and opening of Japan, coupled with the collapse of the Qing Empire → American economic and political power

Fig. 1: Japanese loanword borrowing phases

In the first of these phases we find a now unproductive pattern of vowel epenthesis, first noted by Ichikawa (1930) and Doi (1933) and termed by the former ‘vowel harmony’. Since this term has come to refer, in modern linguistic usage, to a different phenomenon, I will henceforth employ the term ‘vowel replication’ to refer to what Ichikawa noted some eight decades ago.

Vowel replication is found as either anticipatory or perseverant: the former is by far the more common and some examples are illustrated in (5), with first attestation dates cited in parentheses.³ Here, the epenthetic vowel, indicated in bold, replicates the following vowel, underlined:

³ First attestation dates are taken from either NKD (2000–02) or Arakawa (1977), whichever is the earlier.

(5)	Por. <i>credo</i>	ker <u>e</u> do	‘credo’	[1600]
	Por. <i>cristão</i>	kir <u>i</u> šitan	‘Catholic’	[1587]
	Por. <i>profeta</i>	por <u>o</u> heeta	‘prophet’	[1600]
	Por. <i>padre</i>	bater <u>e</u> N	‘priest’	[1569]
	Por. <i>sacramento</i>	sakar <u>a</u> meNto	‘sacrament’	[1592]
	Lat. <i>ecclesia</i>	ekere <u>s</u> ia	‘church’	[1600]

However, there are also examples of Iberian borrowings where vowel replication does not occur and the epenthetic vowel is /u/:

(6)	Por. <i>irmão</i>	iruma <u>N</u>	‘lay brother’	[1568]
	Por. <i>altar</i>	aruta <u>r</u> u	‘altar’	[1591]
	Por. <i>baptismo</i>	bapu <u>č</u> izumo	‘baptism’	[1591]
	Por. <i>mártir</i>	maru <u>č</u> iru	‘martyr’	[1600]
	Por. <i>bispo</i>	bisupo	‘bishop’	[1636]

Sawada (1985) has claimed that vowel replication in Iberian borrowings is most likely to occur when the final consonant in a donor cluster is a liquid, i.e. before Jp. /r/ (< Por. |l r|). Her claim appears to be broadly correct, as is clear from (5) and (6) above.

Anticipatory vowel replication can also be found in a few borrowings from the later Dutch borrowing phase, as illustrated in (7), while both anticipatory and perserverant vowel replication may even be seen (8) in a very few borrowings from the early part of the most recent borrowing phase, the Western.

(7)	Du. <i>glas</i>	gar <u>a</u> su	‘glass’	[1763]
	Du. <i>trap</i>	tar <u>a</u> Qpu	‘air stairs, gangplank’	[1848]
	Du. <i>strychnine</i>	sutorikin <u>i</u> jine	‘strychnine’	[1837]
(8)	Eng. <i>salad</i>	sar <u>a</u> da	‘salad’	[1874]
	Eng. <i>truck</i>	tor <u>o</u> Qko> toro	‘handcar’	[1907]
	Fr. <i>croquette</i>	kor <u>o</u> Qke	‘croquette’	[1909]

4. Epenthetic Vowels in Donor Back Fricatives

Not discussed – intentionally – in §2 was the epenthetic vowel patterning currently found after the donor back fricatives $[x \text{ } \chi \text{ } h]$, as illustrated in Fig. 2.

PRECEDING DONOR VOWEL	EXAMPLE 1		EXAMPLE 2	
open front	Ger. <i>Bach</i>	baQha	Ar. فتح <i>fatah</i>	fataha
non-open front	Du. <i>Maastricht</i>	maasutorihito	Ger. <i>Brecht</i>	burehito
close back	Ger. <i>Buchner</i>	bufunaa	Ger. <i>Bruch</i>	buruQfu
non-close back	Du. <i>van Gogh</i>	bangoQho	Gae. <i>loch</i>	roQho
no preceding vowel	Du. <i>Groningen</i>	furooniNgeN	Du. <i>van Doesburg</i>	fandoosuburufu

Fig. 2: Epenthetic vowels found with donor back fricatives

While the number of such borrowings is not great, and many relatively obscure, it is clear donor back fricative patterning differs wholesale from the other major epenthetic vowel pathways shown in (1)-(4). Instead, it mirrors closely the anticipatory vowel replication patterning found historically in Iberian and Dutch borrowings and illustrated in (5)-(7). Crucially, however, while with Iberian and Dutch anticipatory replication it is the previous *adapted* vowel which determines the epenthetic vowel, with back fricative anticipatory replication it is the previous *donor* vowel. When this donor vowel is open front, the epenthetic vowel is /a/, while with other front vowels it is /i/. When the donor vowel is close back, the epenthetic vowel is /u/, while with other back vowels it is /o/. When there is no preceding donor vowel, the epenthetic vowel is unmarked /u/. This is schematized in Fig. 3.

	FRONT	BACK
OPEN	a	o
MID	i	o
CLOSE	i	u

Fig. 3: Epenthetic vowels found with donor back fricatives

Why does anticipatory replication, a patterning which appears to have disappeared over a century ago, continue to be found with the donor back fricatives [x ɣ h], as illustrated in Figs. 2 and 3? Consider:

(9) Ru. (Нагорный) Карабах	karabafu	*karabaha	‘Nagorno-Karabakh’
Ru. Ахматова	afumaatova	*ahamaatova	‘(Anna) Akhmatova’
Pol. <i>Lech</i>	refu	*rehi	‘Lech (Wałęsa)’

In the borrowings from Russian and Polish in (9), epenthetic /u/ has indeed replaced anticipatory vowel replication, despite the donor back fricatives. The answer to both why anticipatory replication continues to be found with borrowings containing the donor back fricatives [x ɣ h], as in Figs. 2 and 3, and also to why it has been replaced by unmarked epenthetic /u/ in borrowings from Russian and Polish, as in (9), lies in a sociohistorical linguistic phenomenon known as the ‘dictionary tradition’.

5. Dictionary Traditions and Codification

Borrowing pathways in Japanese have resulted in the three types of loan illustrated in Fig. 4: auditory, dictionary and spelling. Here, the source (stage ❶) of a donor word may be auditory or, more commonly, orthographic, in which case, it is frequently assigned a dictionary pronunciation (stage ❷). As stated in footnote 1, my definition of the Japanese loanword includes the condition that it must have ‘undergone adaptation’ to Japanese phonology: this adaptation (stage ❸) is based on the auditory input in the case of an auditory source, while in the case of an orthographic source, it is based on dictionary traditions (to be explained further below). These three different pathways result in auditory, dictionary and spelling loans, as indicated in stage ❹.

Borrowing in Japanese has occurred in a distant setting with little direct auditory contact (Irwin 2011:

1-3). However,

[t]he early decades of the Western borrowing phase did witness a more significant proportion of loans likely the product of auditory contact... It was, however, Japanese writers and essayists of the period who were chiefly responsible for introducing loanwords into the general speech community. Many of these... would lard their works with what at this stage were widely incomprehensible *gaikokugo* [cf. fn. 1]... which underwent adaptation follow[ing] a variety of pathways depending on the author... In time, as many of these words became established in the general speech community, levels of comprehension increased and what were *gaikokugo* became *gairaigo*... As the influence of foreign-language, especially English-language, education grew, so awareness of correct donor pronunciation heightened and the probability of a more accurate adaptation increased. By the post-war period, it was no longer a privileged few authors who disseminated western knowledge and loanwords among the now more educated and increasingly sophisticated Japanese speech community, but academics, teachers, journalists, translators and eventually television presenters and internet bloggers.

Irwin (2011: 78)

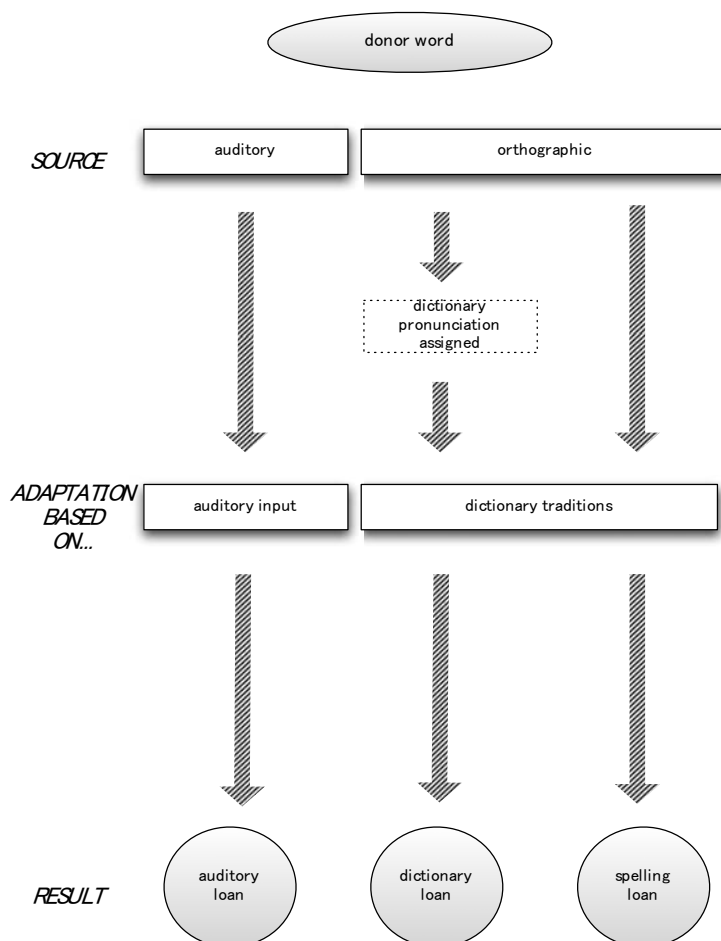


Fig. 4: Borrowing routes in Japanese (from Irwin 2011: 77)

Sociolinguistically crucial, however, is that the fact that foreign language teaching, teaching practice and pedagogy in Japan is still dominated by monolingual Japanese speakers. Non-Japanese nationals remain legally barred from obtaining a teaching licence within the primary and secondary education systems and thus the vast majority of mother-tongue English teachers of English (who are non-Japanese nationals) are unable to teach an English class without the presence of a license holder (i.e. a Japanese national, almost certainly monolingual) in the classroom. Monolingual Japanese teachers of English make great use of grammar/translation methods, and place a great deal more weight on reading, writing and spelling than on pronunciation (Gottlieb 2005:31–32, Mantero & Iwai 2005, Daulton 2008:2–3). As Irwin (2011: 78) notes, ‘this, coupled with lack of auditory contact, means that the influence of donor

orthography on any potential loanword disseminator remains strong’ and loans with an orthographic source have come to dominate the *gairaigo* stratum.

While different donor languages exhibit different dictionary traditions, it is crucial to note that all have in common the fact that their adaptation rules were established and standardized by Japanese scholars of foreign languages, and afterwards perpetuated through their pedagogical practices and foreign language textbooks.

Irwin (2011: 78)

Thus, dictionary traditions are ‘in effect prescribed adaptation strategies’⁴ (Irwin 2011: 79) and an excellent example of codification (Haugen 1966: 931, Gumperz 1968: 469) which, sociohistorically and pan-culturally, has been controlled by elite groups of scholars and grounded in these scholars’ deep knowledge of donor language phonemics. Since each donor language has its own codified adaptation strategy, the same donor sound may follow more than one adaptation pathway. This is illustrated in (10) for the velar nasal [ŋ], in (11) for schwa [ə], and in (12) for [v].

⁴ Further detail is perhaps necessary here. As Irwin (2011: 78–79) notes, ‘since its spelling is notoriously opaque, donor words from English are typically assigned a dictionary pronunciation at a point prior to adaptation (stage ②)... A borrowing whose source is orthographic (stage ①), which has been assigned a dictionary pronunciation (stage ②), and which has undergone adaptation based on a dictionary tradition (stage ③) is a ‘dictionary loan.’’ Moreover, (opus cit.: 79–80): ‘[I]loans whose source is orthographic also include a not insignificant number of cases where a dictionary pronunciation has not been assigned at stage ②. Here, when adaptation (stage ③) has been based on a spelling which is an inaccurate representation of pronunciation, the result is a ‘spelling loan’ (*tsuzuriji hatsuon*).’ A recent example is *wikipedia* ‘Wikipedia’ for expected **wikipidia*. Other, longer established, examples include *buzaa* ‘buzzer’ for expected **bazaa*, or *supoNji* ‘sponge’ for expected **supaNji*. ‘When a dictionary pronunciation has not been assigned and the adaptation has been based on a spelling which is an *accurate* [emphasis original] representation of pronunciation, then a spelling loan is indistinguishable from a dictionary loan. This is not unusual when the donor word is from a language with a highly transparent spelling system, such as German, Russian or Italian’ (opus cit.)

(10) |ŋ| from East Asian languages → Jp. /N/:

Bei. <i>Zhàjiàngmiàn</i> 炸酱面	jaajaNmeN	‘fried sauce noodles’
Kor. <i>p’yŏngyang</i> 평양	pyoNyaN	‘Pyongyang’
Viet. <i>việt cộng</i>	betokoN	‘Viet Cong’

|ŋ| from European languages → Jp. /Ng/:

Eng. <i>ranking</i>	rankiNgu	‘ranking’
Ger. <i>Doppelgänger</i>	doQperugeNgaa	‘doppelgänger’
Sw. <i>Helsingborg</i>	herušiNgubori	‘Helsingborg’

(11) |ə| from German → Jp. /e/:

Ger. <i>These</i>	teeze	‘thesis’
Ger. <i>Gelände</i>	gereNde	‘piste’

|ə| from French → Jp. /u/:

Fr. <i>Bretagne</i>	burutaanyu	‘Brittany’
Fr. <i>reportage</i>	ruporutaaju	‘documentary’

|ə| from English → Jp. various:

Eng. <i>police</i>	porisu	‘police’
Eng. <i>garden</i>	gaadeN	‘garden’
Eng. <i>option</i>	opušoN	‘option’

(12) |v| from Russian and German → Jp. /w u/ before /a e i o/, Jp. /b/ or ø before /u/:

Rus. Москва	mosukuwa	‘Moscow’
Ru. Владивосток	urajiosutoku	‘Vladivostok’
Ger. <i>Wien</i>	wiɪN	‘Vienna’
Ger. <i>Wuppertal</i>	buQpaataaru	‘Wuppertal’

|v| from English, French and Italian → Jp. /b/ (or /v/ for some innovative speakers):

Eng. <i>veteran</i>	beteraN	‘old hand’
Eng. <i>violin</i>	baiorɪN	‘violin’
Fr. <i>vinyle</i>	biniiru	‘plastic’
It. <i>da Vinci</i>	dabiNči	‘da Vinci’

Why Japanese of Chinese and Korean came to prescribe /N/ for donor [ŋ], while scholars of German and English came to prescribe /Ng/ for the same donor sound is a matter for future sociohistorical research. The fact remains, however, that the systematic and thoroughgoing nature of the examples in (10)-(12) leaves no room for doubt that we are dealing with codification. To these codified adaptation pathways we must also add donor [x]. When borrowed from a Slavic language the epenthetic vowel is /u/ but, when borrowed from German, Dutch, Arabic and the Celtic languages, the epenthetic vowel varies according to the preceding donor vowel:

(13) epenthetic vowel after |x| from Slavic languages → /u/:

Ru. Казахстан	kazafusutaN	‘Kazakhstan’
Ru. Рахманиновъ	rafumaninofu	‘Rachmaninoff’

epenthetic vowel after |x| from German, Dutch, Arabic and Gaelic → varies according to preceding donor vowel (see Fig. 3):

Ger. <i>Büchner</i>	byuuhina	‘(Georg) Büchner’
Du. <i>Anderlecht</i>	anderulehito	‘Anderlecht’
Ar. <i>Fahd</i>	fahado	‘(King) Fahd’
Gae. <i>Connacht</i>	konahato	‘Connacht’

6. Conclusions

The history of borrowing into Japanese cannot be adequately explained by simply having recourse to one of the two standard hypotheses of either a phonological (e.g. La Charité & Paradis 2005) or a phonetic (e.g. Silverman 1992) input. It must be remembered that the vast majority of borrowing into Japanese is, and always has been, orthographic. The codification of dictionary traditions in order to facilitate such borrowing is in line both with the strong Japanese pedagogical culture of focusing on writing and reading over speaking and listening, and with according huge esteem to those engaged in the teaching profession.

Bibliography

- Arakawa Sōbei (あらかわそおべえ) (ed.) 1977 外来語辞典 (Loanword Dictionary). Tokyo: Kadokawa Shoten.
- Daulton, Frank 2008 *Japan’s Built-In Lexicon of English-Based Loanwords*. Clevedon: Multilingual Matters.
- Doi Tadao (土井忠生) 1933 日本耶蘇会の用語に就いて (On the Terminology of the Jesuits in Japan). *Gairaigo Kenkyū* 3: 7-22.
- Gottlieb, Nanette 2005 *Language and Society in Japan*. Cambridge: Cambridge University Press.

- Gumperz, J. 1968 [1962] Types of linguistic communities. In J. Fishman (ed.) *Readings in the Sociology of Language*. 460–472. The Hague: Mouton.
- Haugen, Einar 1966 Dialect, Language, Nation. *American Anthropologist* 68.4: 922-935.
- Ichikawa, Sanki 1930 The Pronunciation of English Loan-words in Japanese. In N. Bøgholm, Aage Brusendorff & C.A. Bodelsen (eds.) *A Grammatical Miscellany Offered to Otto Jespersen on His Seventieth Birthday*. 179-190. Copenhagen: Levin & Munksgaard.
- Irwin, Mark 2011 *Loanwords in Japanese*. Amsterdam and Philadelphia: John Benjamins.
- LaCharité, Darlene & Carole Paradis 2005 Category Preservation and Proximity Versus Phonetic Approximation in Loanword Adaptation. *Linguistic Inquiry* 36: 223-258.
- Maekawa, Kikuo & Hideaki, Kikuchi 2005 Corpus-Based Analysis of Vowel Devoicing in Spontaneous Japanese: an Interim Report. In Jeroen van de Weijer, Kensuke Nanjo & Tetsuo Nishihara (eds.) *Voicing in Japanese*. 205-228. Berlin and New York: Mouton de Gruyter.
- Mantero, Miguel & Yuko Iwai 2005 Reframing English Language Education in Japan. *Asian EFL Journal* 7.2: 164-173.
- NKD = Shōgakukan (小学館) (ed.) 2000-2002 日本国語大辞典 (The Great Dictionary of the Japanese Language). Tokyo: Shōgakukan.
- Sagisaka, Y. and Y. Tohkura 1984 Phoneme Duration Control for Speech Synthesis by Rule. *Trans. Inst. Electron. Commun.* J67-A: 629-636.
- Sawada, Tazuko (澤田田津子) 1985 外来語における母音添加について (Which Kana are Used in Japanese Loan-Words Borrowed from Words Containing Two-Consonants Series? (sic.)). *Kokugogaku* 143: 75-88.
- Silverman, Daniel 1992 Multiple Scansions in Loanword Phonology: Evidence From Cantonese. *Phonology* 9: 289-328.
- STK = Sōmushō Tōkei Kenshūjo (総務省統計研修所 Japanese Ministry of Internal Affairs and Communications, Statistical Research and Training Institute) (ed.) 2008 日本統計年鑑 (Japan Statistical Yearbook). Tokyo: Sōmushō Tōkeikyoku.
- Vance, Timothy 2008 *The Sounds of Japanese*. Cambridge: Cambridge University Press.